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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,996	02/18/2004	Derek William Bamborough	80044	2765

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EXAMINER

MCLENDON, SANZA L

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 04/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/780,996

Applicant(s)

BAMBOROUGH ET AL.

Examiner

Sanza L. McClendon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) 61,62,64-70 and 72 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-60,63 and 71 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

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## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-60, 63, and 71, drawn to an adhesive composition, classified in class 522, subclass 110.
  - II. Claims 61-62 and 72 drawn to an adhesive composition, classified in class 428, subclass 355AC.
  - III. Claims 64-68, drawn to a process of making an adhesive composition, classified in class 427, subclass 207.1.
  - IV. Claim 69, drawn to a process to produce a UV cured adhesive, classified in class 427, subclass 516.
  - V. Claim 70, drawn to process for producing a radiation cured adhesive, classified in class 427, subclass 508.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions because the two compositions comprise different at least one required components—see claim 61 needs a substrate in the composition.
3. Inventions I and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product (composition) can be used in a materially different process, such as making a free standing film, i.e., without contacting on a substrate or can be cured by heating.
4. Inventions I and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions because the adhesive composition of Group I (i.e., claim 61) is not required in the process of claim 69.
5. Inventions I and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions because the adhesive composition of Group I (i.e., claim 61) is not required in the process of claim 70.

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6. Inventions II and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed (i.e., claim 61) can be produced by another materially different process, such as curing said adhesive composition by thermal exposure. Note claim 61 as written only requires that the radiation curable composition within the adhesive composition is polymerized by exposure to radiation.

7. Inventions II and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions the adhesive for Group IV is different from the cured adhesive product composition of Group II.

8. Inventions II and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions the radiation curable composition within the adhesive composition is not the same as the composition in the process of group V, i.e., the comprising a photoinitiator with optional thixotropic agent. In addition, the radiation curable composition in the process of group V is not required to be polymerized by exposure to radiation.

9. Inventions III and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions the radiation curable adhesive in Group III is not same and is not required in the process of Group IV.

10. Inventions III and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions the process of Group III is not the same and does not required the same steps as the process in Group V.

11. Inventions IV and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions the process do not require the same steps or the same composition.

12. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

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13. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II-V, restriction for examination purposes as indicated is proper.

14. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

15. During a telephone conversation with Bernard Graves on April 6, 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-60, 63 and 71. Affirmation of this election must be made by applicant in replying to this Office action. Claims 61-62, 64-70 and 72 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

16. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

#### ***Double Patenting***

17. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the

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conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

18. Claims 1-60, 63 and 71 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-63 of copending Application No. 10/780,989. Although the conflicting claims are not identical, they are not patentably distinct from each other because they appear to comprise overlapping subject matter. The primary difference is the limitation "wherein said tackifier resin has a low residual monomer concentration" in claim 1 of 10/780,989. However, claims 16 and 23-27 when combined with claim 1 of the instant application shows this claimed composition is intended to also have a low residual monomer concentration. Another differences, such as claims 45-48 of 10/780,989 are properties inherent to the tackifier resin and are deemed to be inherent in the instant application. The last difference can be found in claim 61 of 10/780,989, however the examiner deems that an artisan of ordinary skill in the art would have found it obvious to coat as type substrate the needs to be adhered to another, such as those found in claim 61, depending of the desired final product.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

19. Claims 1-60, 63 and 71 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-49 and 66 of copending Application No. 10/780,987. Although the conflicting claims are not identical, they are not patentably distinct from each other because they appear to overlap in subject matter. The adhesive composition and article of 10/780,987 overlaps with the adhesive composition of the instant application. The primary difference is the adhesive of 10/780,987 does not have the radiation curable composition component. However 10/780,987 discloses the adhesive composition includes, besides the claimed tackifier, an adhesive component—see page 17, tables 7-8 and example 7. These appear to read on the instant claimed radiation curable composition component of the adhesive. Another difference is instant claim 55, however 10/780,987 teaches using acResin® A 258 in the examples, which would render claim 55 obvious. Other differences can be seen in instant claims 56-60, however these can be found in the general disclosure of 10/780,987 in such as way that it would have been obvious for an artisan of ordinary skill in the art at the time of the invention to obtain the instant claimed adhesive composition.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102***

20. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

21. Claims 1-14, 16, 18-33, 36-37, 40, 42-60, 63, and 71 are rejected under 35 U.S.C. 102(e) as being anticipated by Takizawa et al (6,783,850).

Takizawa et al teaches acrylic pressure sensitive adhesives comprising 5 to 75 parts by weight of a acrylic polymer, 5 to 40 parts by weight of an acrylic tackifier resin and 20 to 90 parts by weight of acrylic monomers. Said acrylic polymer has tackiness at room temperature and a T<sub>g</sub> in the range from 0 to -85 °C. Said polymer comprises at least 50% by weight of an (meth) acrylic ester monomer, such as found in column 10, lines 25-35. In addition, said polymer may a copolymer prepared by polymerizing said (meth) acrylic ester with another copolymerizable monomer, such as found in columns 10-11, wherein acrylamides, vinylidene chloride, acrylonitrile, and others can be found.

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The tackifier resin has a low molecular weight, preferably in the range between 10,000 and 2,000 and is prepared from (meth) acrylic esters, such as used in the polymer component. In addition, it is disclosed that said tackifier resin can be a copolymer of said (meth) acrylic acid ester monomer with another copolymerizable monomer, such as styrene or methylstyrene among others—see column 13, lines 35. Said copolymer tackifier resin preferably has a (meth) acrylic ester content of at least 50% by weight up to at least 90% by weight—see column 12. The examiner deems this means that the copolymerizable components can comprise at least 50% down to 10% by weight of the tackifier resin component, such as styrene. Additionally, said tackifier can have other functional groups, such as hydroxyl, carboxyl, or cycloaliphatic and others—see column 13, lines 40-45 and examples. Takizawa et al teaches said obtained tackifier resin is preferably polymerized to a 100% degree of polymerization—see column 15, lines 63-67. The examiner is interpreting this to mean having substantially no residual monomer content, thus anticipated applicant's low residual monomer concentration claims. Claims 31-32 are deemed to be anticipated because the KOH/g can be 0. In addition, the examiner deems the R&B softening point, the Gardner color, and the MMAP cloud point is inherent to the disclosed tackifier resin.

The pressure sensitive adhesive composition can additionally comprise other components, such as photoinitiators, crosslinking agents, inorganic substances, and other customary additives, such as those found in instant claim 60—see columns 16-17. Per preparation of the polymers in the examples teaches preparing acrylic copolymer syrups having a viscosity of at least 5000, while the copolymer itself had a Tg of  $-59^{\circ}\text{C}$ . This appears to anticipate claim 55. In addition, per the examples Takizawa et al teaches mixing the radiation curable adhesive polymer component, the tackifier resin and other components, applying said mixture to a substrate and curing by exposure to ultraviolet radiation to obtain cured adhesive tape articles. This anticipates claim 63.

22. Claims 1-2, 14, 28, 30-35, 42, 44-45, 47-60, 63 and 71 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin et al (5,028,484).

Martin et al teaches pressure sensitive adhesives comprising (a) radiation polymerized polymer from acrylic monomers and (b) an aromatic polymeric tackifier resin. Said aromatic tackifier resin is a polystyrene resin, such as a poly t-butylstyrene resin. Martin et al teaches said tackifier resin can be functionalized with an acrylate, acid, or hydroxyl group. Per examples (see column 12 and table IV) Martin et al teaches making acrylic terminated t-butyl styrene polymer, adding it to a acrylic polymer pre-mixture/syrup, photoinitiator, and crosslinking agent to form a mixture, coating a substrate, and curing with ultraviolet radiation to form a cured adhesive article. In addition to these components it is disclosed in the reference customary additive can additionally be added, such as those found in column 8, lines 19-20, wherein plasticizers, coloring agents, among others taught. Said acrylate terminated tackifier is prepared used a radical initiator. Said acrylic polymer comprises from 50 to 95 parts by weight of one or more alkyl acrylate compounds, wherein said alkyl group has from 4 to 12 carbon atoms and from 0 to 15



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parts by weight of one or more strongly polar monomers or about 0 to 30 parts by weight of one or more moderately polar monomers, which can be pre-polymerized to a viscosity from 500 to 50,000 cps, wherein at least the lower limits anticipate applicants ranges—see examples also. These can be found in column 4, wherein these appear to anticipate at least some of the instantly claimed monomers in the radiation curable polymer. While there is no disclosure of the T<sub>g</sub> for the said polymer components, the monomers used to prepare said polymer when homopolymerized are known to have T<sub>g</sub>'s of 0 °C or less; therefore it is deemed said polymers of the reference inherently anticipate the claimed T<sub>g</sub>'s. Per the examples (see table III) the tackifier is added in amounts of 25 parts by weight, thus anticipating claims 56-57. Said tackifier resin has a number average molecular weight in the range from 300 to 2500, which anticipates claims 34-35. Said tackifier can be found in amounts from at least 15 to 35 parts by weight in the composition—see column 5, lines 25-30. Said tackifier should inherently have the properties found in claims 30-33, and 42.

#### ***Claim Rejections - 35 USC § 112***

23. The following is a quotation of the second paragraph of 35 U.S.C. 112:
- The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
24. Claims 9 and 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
25. With respect to claim 9, claim 9 discloses sodium 1-allyloxy-2-hydroxypropyl sulfonate, alkyl crotonates, vinyl acetate, di-n-butyl maleate, di-octylmaleate as a suitable monomer, however the preamble states the monomer is an acrylate monomer. It is unclear if applicant is intending to claim only acrylate monomers and/or other ethylenically unsaturated monomers also. Clarification is requested.
26. Regarding claim 46, it is unclear if applicant is intending for the polymer to have all these components, since claim 43 states at least one repeating unit from styrene, acrylic acid and 2-ethylhexyl acrylate or if applicant is intending for the polymer to have when selected the claimed repeating unit percentage amounts.

#### ***Claim Objections***

27. Claim 43 is objected to because of the following informalities: it appears to have improper Markush language, i.e., selected in defining the Markush grouping of the monomer units, when used proper Markush language is employed it should read: "selected from the group consisting of".

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**Conclusion**

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L. McClendon whose telephone number is (571) 272-1074. The examiner can normally be reached on Monday through Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sanza L. McClendon

Examiner

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